

BASIS FOR THE AMENDMENT

The Abstract has been amended so as to comply with the Rules.

Claims 1 and 9 have been amended in a manner so as to overcome their asserted indefiniteness. No new matter has been introduced thereby.

REMARKS

Favorable reconsideration of this application is requested.

Claims 1-15 are in the case. They stand rejected under 35 U.S.C. § 103 as being unpatentable over Niwa et al.

This rejection is traversed. The invention relates to a method for producing a silicon nitride filter, which comprises heat-treating in nitrogen a green body comprising: from 35-90 mass% of silicon nitride particles having an average particle diameter of from 1 to 30 μm , from 5 to 60 mass% of a pore-forming agent and from 0.1 to 5 mass% of metal oxide particles, provided that the total amount of the silicon nitride particles, the pore-forming agent and the metal oxide particles is at least 90 mass%, to form a porous product. The method provides for the production of a silicon nitride filter suitable for dust arresting or dust removing, particularly being suitable for removing dust present in a high temperature exhaust gas from a diesel engine.

Such method manifestly is not disclosed nor obvious from Niwa et al. Specifically, Niwa et al. relates to the preparation of a slidable member, i.e., a valve unit formed of a porous ceramic material high in thermal shock and thermal stress resistance while maintaining good sliding characteristics even upon a long time of use. The claimed invention, on the other hand, relates to a method for producing a silicon nitride filter suitable

for dust arresting or dust removing. Completely different and non-analogous objectives thus are involved in the present invention as compared to the invention of Niwa et al.

Further, such different objective is realized in a significantly and materially different manner employing materials and conditions result effective for such different and non-analogous objective. More particularly, in the claimed method, the green body is heat-treated in nitrogen. In Niwa et al., on the other hand, heat-treatment can be effected in a variety of atmospheres (column 7, lines 25-29), atmospheric air being specifically illustrated (column 8, lines 44-45), whereas an atmosphere of nitrogen is essential in the claimed invention. Also, as ceramic material in Niwa et al. it is not essential that it be silicon nitride, other ceramic materials being equally suitable (column 4, lines 6-11). As a matter of fact, only alumina is specifically illustrated in their experiment. Further, the objective of Niwa et al. is to obtain an average pore diameter significantly greater than as obtained by the claimed method (column 4, lines 52-57). Note Claim 5.

Thus, it cannot reasonably be said, as the Examiner asserts, that the claimed different parameters would have obviously been selected to optimize the process conditions and/or the properties of the final product, when varied and different objectives are desired in the claimed invention as compared to the invention of Niwa et al. Optimization to provide a porous ceramic material for a slidable member excellent in sliding characteristics and durability under thermal shock and thermal stress manifestly would not be considered by the artisan to also be result-effective in the making of a filter for removing or arresting dust, specifically in a high-temperature exhaust gas. Note *In re Antonie*, 195 USPQ 6.

That the claimed parameters are result-effective is demonstrated by the examples and comparative examples in the case. Note in particular, Comparative Examples 7, 8 and 13. If, as there shown, the materials and/or conditions are not as claimed, significantly and

materially inferior products are obtained. Such additionally refutes any possible prima facie case of obviousness conceivable made out by Niwa et al., unobviously superior results being obtained due to the particular selections of materials and conditions as claimed. It is only when the conditions and materials are as defined in the claims, that the different objective of the claimed invention is realized.

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103 is requested.

With regard to the rejection of the claims under the second paragraph of 35 U.S.C. § 112, they have been amended in a manner believed to obviate this rejection, its withdrawal thus being requested.

Should any further amendment to the claims be considered necessary by the Examiner, he is requested to contact the undersigned by telephone so that mutually agreeable language may be arrived at.

It is submitted that this application is now in condition for allowance and which is solicited.

Respectfully submitted,

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IN THE ABSTRACT

ABSTRACT OF THE DISCLOSURE

A method for producing a silicon nitride filter[, which comprises] by heat-treating in nitrogen a green body [comprising] of from 35 to 90 mass% of silicon nitride particles having an average particle diameter of from 1 to 30 μ m, from 5 to 60 mass% of a pore-forming agent and from 0.1 to 5 mass% of metal oxide particles, provided that the total amount of the silicon nitride particles, the pore-forming agent and the metal oxide particles is at least 90 mass%, to form a porous product [made substantially of silicon nitride].

IN THE CLAIMS

1. (Amended) A method for producing a silicon nitride filter, which comprises heat-treating in nitrogen a green body comprising:
from 35 to 90 mass% of silicon nitride particles having an average particle diameter of from 1 to 30 μ m,
from 5 to 60 mass% of a pore-forming agent and
from 0.1 to 5 mass% of metal oxide particles,

provided that the total amount of the silicon nitride particles, the pore-forming agent and the metal oxide particles is at least 90 mass%,

to form a porous product [made substantially of silicon nitride].

9. (Amended) A method for producing a silicon nitride filter, which comprises heat-treating in nitrogen a green body comprising:

from 45 to 85 mass% of silicon nitride particles having an average particle diameter of from 1 to 30 μ m,

from 10 to 50 mass% of metal oxide hollow particles and

from 0.1 to 5 mass% of metal oxide solid particles,

provided that the total amount of the silicon nitride particles, the metal oxide hollow particles and the metal oxide solid particles is at least 90 mass%,

to form a porous product [made substantially of silicon nitride].